Research Paper | Education | E-ISSN No : 2454-9916 | Volume : 9 | Issue : 9 | September 2023

FINANCIAL STABILITY AND PERFORMANCE ANALYSIS OF MANUFACTURING AND NON-MANUFACTURING INDIAN PENNY STOCKS

Ms.Arpita Koppad[1], Dr. Mahesh Bendigeri[2]

[1] Student, Global Business School, Hubbali
[2] Professor, Global Business School, Hubbali

ABSTRACT

Penny stocks are low-priced stocks that typically trade for less than Rs. 10 per share, and they often represent small companies with limited resources and market capitalization. Due to their low price and high volatility, investing in penny stocks can be risky and speculative while penny stocks can offer opportunities for significant gains, they come with higher risks. It's crucial to assess the financial stability and performance of penny stocks carefully and incorporate them into a well-balanced and diversified investment portfolio. In view of this, the current study was conducted to assess the financial stability and performance of penny stocks listed on the NSE and BSE, using financial performance ratio and Altman Z Score model. For this 34 penny stocks have been selected, of which 17 are manufacturing firms and 17 are non-manufacturing firms, financial data is collected from 2017 to 2021, and using the predictive bankruptcy model of Altman, it is discovered that two firms are in the distress zone and five entities are in the grey zone among the non-manufacturing firms, and two firms are in the grey zone among the manufacturing firms. 59% of penny stocks are priced between Rs. 1 and Rs. 5. And 24% of them are between Rs. 0.1 and Rs. 1. When the financial ratios are compared, it is discovered that non-manufacturing penny stock firms have better current ratios, quick ratios, debt-equity ratios, and ROE than manufacturing firms. Finally, a significant difference in financial stability and performance is discovered between manufacturing and non-manufacturing penny stock firms.

KEYWORDS: Financial Stability, Penny Stock, Altman Z Score, Grey Zone, Distress Zone.

INTRODUCTION

Every business endeavour is carried out in order to make a profit. All stakeholders in a company or business organisation will be interested whether the organisation is likely to succeed in the near future to stay with that organisation. Banks, for example, anticipate the risk of bankruptcy before providing financial assistance to any organisation. It's fascinating to learn whether a company will succeed or fail before lending money. In this regard, numerous theories and tools have emerged. Business failure has been a major motivator for the development of bankruptcy theories and tools. A business failure occurs when an organization's revenue is insufficient to cover its expenses and debts. People have invested their hard-earned money in a variety of stocks with prices ranging from Rs. 1 to Rs. 1000+ over the years, while Penny stocks in India are traded at a low price and volume. In India, the minimum price for penny stocks is Rs. 0.01. These are available for purchase on the NSE and BSE. Because of their low price, penny stocks are used to gain trading experience for new traders. Because these stocks are so cheap, it is almost risk-free to try your luck with penny stock trading. Penny stocks are popular among small investors due to their high potential for profit. Gains of 300% to 500%, or even more, are possible. Even with a small investment of Rs 100/-, there is a good chance of making a profit of Rs 500/-. However, finding the right penny stock and investing in it is a difficult task. So, in this study, we attempted to select 34 penny stocks with average prices ranging from Rs. 0.01 to Rs. 10, and we used financial data and the Altman Z score to find quality penny stocks to recommend to investors.

OBJECTIVES

1. To use the predictive bankruptcy model of Altman in evaluating the firm performance and likely chance of whether it will file for bankruptcy within two years.
2. To analyzes the performance of penny stocks using various financial ratios.
3. To suggest to prospective investors the best and most reliable penny stocks listed on NSE & BSE.

LITERATURE REVIEW

Leonardo and Jaime (2003) conducted study on bankruptcy risk of Italian manufacturing firm and found that bankruptcy risk to be accurate using Z score model. Hussain at.el (2014) finding is also in similar line on textile industry in Pakistan using Z score model within 4 years, but this gets predictable rate decrease on the sample of 12 firms are considered between 2000 to 2010. Cuong and Anh (2010) assessed using Z score model with respect to bankruptcy risk of companies listed in Vietnamese stock exchange involved in seafood processing industry and recommended to reduce credit exposure to seafood processing industry, to lower the risk of bankruptcy. Anh and Hang (2012) demonstrated using 292 firm listed on Ho Chi Minh City Stock Exchange the accuracy level of 91% one year before financial distress, this percentage reduced to 72% within two years period. Chandra and Selvaraj (2013) studied financial status of various steel companies operating in India, applying Z-score model, it is found that none of the companies were in safe zone, instead small firm were in grey zone and medium and large firms were in distress zone. Duong (2013) in his studied made use of Z score to assess the bankruptcy risk and financial status of 36 commercial bank and assisting banks in responding to market changes in a timely manner. Dr. P. Mohana Sundaram (2015) selected five sugar companies listed on the NSE and BSE and determined that the financial health of Shree Renuka Sugars Ltd and Balarampur Chini Mills Ltd is satisfactory using the Altman Z Score Model. Dhampur Sugars Ltd, Sakthi Sugars Ltd, and Bannari Amman

Sugars Ltd's financial health is not satisfactory during the study period, as their Z Score values are less than 2.9 in majority of study period. Using the Altman Z-Score, N. C. Shilpa and M. Amulya (2017) made an attempt to study the financial health of Indian Automobile companies. The study discovered that negative working capital is affecting automobile company performance, while companies are declaring dividends, indicating a gradual increase in reserve position. Apoorva at.el (2019) demonstrated a three-year predictive ability of Z-score when companies went bankrupt in India. Dr. Marimutu et al. (2019) attempted to assess the financial health of three telecom service companies in India: Vodafone Idea, RCOM, and Bharti Airtel, and discovered that Vodafone Idea and RCom have moved from the grey zone to the distress zone. Bharti Airtel's financial health, on the other hand, was found to be satisfactory and in the safe zone.

RESEARCH METHODOLOGY

Study area: Penny stocks listed on the National stocks Exchange (NSE) And Bombay Stock Exchange (BSE).

Data Source / Collection: The information is derived from secondary sources such as annual reports from specific companies, money control, various online websites, research papers, and so on.

Sample size: 34 Companies listed in NSE & BSE are selected.

Sampling Technique: Initially 120 Penny Stock whose share price range between Rs. 0.1 to Rs.10 were selected, later after analyzing their share price from 2017 to 2022. We found that 86 companies share price have crossed more than Rs.10 during the study period, so we have excluded them from our study. Finally only 34 companies (17 manufacturing and 17 non-manufacturing) are selected.

Statistical Tools: Altman Z Score and Financial Ratio were used for predicting the financial stability and performance of selected companies.

Period of study: 5 years financial data is collected from 2017 to 2021 covering pre-covid and post-covid period.

Data analysis/ Performance indicator:
Dr. Edward I. Altman's model is used for predicting bankruptcy. To assess financial health and performance, ratios such as the current ratio, quick ratio, earnings per share, D-E Ratio, ROE, and D-P ratio are employed.

Model Altman Z for Manufacturing and Non-Manufacturing Companies

1. Manufacturing companies that are publicly traded:
   $Z = 1.2*X_1 + 1.4*X_2 + 3.3*X_3 + 0.6*X_4 + 1.0*X_5$
2. Non-manufacturing public companies
   $Z = 6.56*X_1 + 3.26*X_2 + 6.72*X_3 + 1.05*X_4$

Ranges:

1. Manufacturing companies that are publicly traded:

Safe Zone	Z value above 2.99
Grey Zone	Z value between1.81 to 2.99
Distress Zone	Z value below1.81

2. Non-manufacturing public companies

Safe Zone	Z value above 2.6
Grey Zone	Z value between1.1 to 2.6
Distress Zone	Z value below1.1

WC/TA(X_1), RE/TA (X_2), EBIT / TA (X_3), Equity market value /TL(X_4), Sales / TA (X_5)

Hypothesis:
H0: There is no statistically significant difference between the Z-scores of manufacturing and non-manufacturing firms.
H1: There is a significant difference in the Z-scores of manufacturing and non-manufacturing firms.

Analysis & Findings:

Table 1: Altman Z-Score of Non-Manufacturing Companies from 2017-18 to 2021-22

Source: Author Computation, S=Safe, G=Grey, D=Distress

Company	2017-18		2018-19		2019-20		2020-21		2021-22		Mean Z Score	Overall Zone
	Z Value	Intre preta tion	Z Value	Intre pret ation	Z Value	Intre pret ation	Z Value	Intre pret ation	Z Value	Intre preta tion		
Smart Finsec	5.5	S	7.66	S	5.58	S	9.21	S	8.05	S	7.20	Safe Zone (59%)
Aravali Sec.& Fin	6	S	3.57	S	1.5	G	9.75	S	4.95	S	5.15	
RattanIndia Power Ltd	4.92	S	3.34	S	2.5	G	6.8	S	7	S	4.91	
GVK Power Infra.	7.75	S	4.02	S	2.94	S	2.72	S	3.01	S	4.09	
Ajooni Biotech ltd	4.09	S	2.45	G	1.65	G	5.3	S	6.25	S	3.95	
Country Condos Ltd	2.38	G	1.4	G	4.2	S	4.4	S	4.96	S	3.47	
Gayatri highways Ltd	1	D	7.17	S	4.05	S	3.7	S	0.9	D	3.36	
CCC Ltd	2.24	G	1.8	G	3.53	S	5.95	S	1.64	G	3.03	
Creative Eye ltd	2.7	S	2.1	G	2.1	S	3.35	S	4.5	S	2.95	
Visagar Polytex Ltd	0.7	D	5.85	S	3.35	S	3.05	S	1.2	G	2.83	
Cranes Software	2.6	S	0.87	D	0.55	S	5.46	S	3.28	S	2.55	Grey Zone (29%)
CNI Research	2.16	G	1.9	G	1.8	S	3.54	S	2.73	S	2.43	
Vijji Finance Ltd	1.95	G	0.45	D	1.2	S	1.75	G	3.25	S	1.72	
Excel Realty & Infra	0.19	D	1.05	D	2.1	S	3.9	S	0.5	G	1.55	
AJR infra	0.7	D	0.48	D	0.77	S	2.59	G	1.38	G	1.18	
B C L Enterprises	0.74	D	0.75	D	0.82	S	0.85	D	1.37	G	0.91	Distres Zone (12%)
MFL India	0.19	D	0.19	D	0.16	S	1.39	G	0.96	D	0.58	

From the table 1 we infer that the 59% (10 out of 17) non-manufacturing firms are in safe zone indicating stable and better financial condition, but considering the Z score of recent period 2021-22 it is found that Gayatri Highways Ltd is in distress zone and CCC ltd and Visagar Polytex ltd is in Grey zone indicating weakening of the financial condition. Even though these companies were in safe zone from 2018 to 2021. Whereas 29% (5 out of 17) non-manufacturing firm are in Grey Zone, out of these 5 firms 3 were in safe zone during 2019 to 2021 they are Cranesh Software, CNI Research and Viji Finance Ltd. Finally 12% (2 out of 17) non-manufacturing firm are in distress condition. And hence investor should avoid investing in these two companies BCL enterprises and MFL India.

From the table 2 we infer that the 53% (9 out of 17) manufacturing firms are in safe zone indicating stable and better financial condition, but considering the Z score of recent period 2021-22 it is found that 2 firms Ujaas Energy and Sathavahana ispat Ltd is in grey zone indicating weakening of the financial condition. These firms were in grey zone in 3 out of 5 years study period. Whereas 35% (6 out of 17) manufacturing firm are in Grey Zone, out of these 3 firms were in safe zone and 3 are in distress zone during 2021-22. Finally 12% (2 out of 17) non-manufacturing firm are in distress condition. Whereas during 2021-22 these two firm were in safe zone i.e.Ankit Metal & Power ltd and Prakash Steeage Ltd. And hence investor should avoid investing in these two penny stock companies.

Table 2: Altman Z-Score of Manufacturing Companies from 2017-18 to 2021-22

Source: Author Computation, S=Safe, G=Grey, D=Distress

Company	2017-18		2018-19		2019-20		2020-21		2021-22		Mean Z Score	Overall Zone
	Z Value	Interpretation	Z Value	Interpretation	Z Value	Interpretation	Z Value	Interpretation	Z Value	Interpretation		
Sumeet Industries Ltd	4	S	7	S	8.55	S	8.75	G	5.05	S	6.67	Safe Zone (53%)
Soma textiles & Industries Ltd	5.4	S	4.75	S	5.4	S	6.8	S	9.2	S	6.31	
Kavveri Telecom Products Ltd	8.2	S	1.75	D	3	S	9.5	G	6.9	S	5.87	
Metalyst Forgings Ltd	10.9	S	1.65	D	3.2	S	4.6	G	3.9	S	4.85	
Premier Ltd	7.25	S	1.8	D	1.65	D	8.65	S	3.25	S	4.52	
Ujaas Energy Ltd	8.2	S	2.5	G	4.4	S	1.95	G	2.9	G	3.99	
National steel and Agro ltd	7.4	S	2.23	G	2.23	G	2.45	G	3.55	S	3.57	
Welcure Drugs	0.52	D	0.49	D	2.22	G	7.56	D	5.58	S	3.27	
Sathavahana ispat Ltd	9.75	S	0.7	D	1.05	D	2.5	G	1.85	G	3.17	
Gayatri Sugars	2.81	G	0.88	D	1.98	G	4.01	D	3.76	S	2.69	Grey Zone (35%)
Supreme engineering Ltd	2.6	G	1.7	D	3.7	S	4	G	1.25	D	2.65	
Bhandari hosiery exports ltd	2.07	G	0.69	D	1.33	D	2.91	G	5.88	S	2.58	
SAB Events & Goverance Ltd	3.35	S	0.55	D	0.6	D	2.58	G	5.55	S	2.53	
Century Extrusions Ltd	8.06	S	0.91	D	0.42	D	1.47	D	1.02	D	2.38	
Antarctica ltd	0.5	D	1.9	G	3.3	S	5.1	S	0.8	D	2.32	
Ankit Metal & Power ltd	0.5	D	0.5	D	0.5	D	1.6	D	5.85	S	1.79	Distress Zone (12%)
Prakash Steeage Ltd	0.4	D	0.08	D	0.19	D	0.61	D	5	S	1.26	

Table 3: Showing Year-wise distribution of Non-Manufacturing Penny Stocks based on Share Price

Share Price	2017-18	2018-19	2019-20	2020-21	2021-22	Average No. of Penny Stock	%
0.01 to 1.00	6	5	4	2	3	4	24%
1.01 to 3.00	6	6	8	3	5	5.6	33%
3.01 to 5.00	3	3	4	6	6	4.4	26%
5.01 to 7.00	1	1	1	4	2	1.8	11%
7.01 to 10.00	1	2	0	2	1	1.2	7%
Total	17	17	17	17	17	17	100%

Source: Author Computation

From table 3 it is found that 33% of non-manufacturing penny stocks are having share price in the range of Rs. 1.01 to Rs. 3.00. On observing the year wise trend in number of penny stock price movement. It is found that penny stocks which were in price range of Rs. 0.01 to Rs. 1 showed upward movement in price resulting into decrease in number of penny stock in price range of 0.01 to Rs. 1.00 from 2017-18 to 2021-22. Whereas significant number of penny stock increased in price band of Rs. 3.01 to Rs. 5.00 from 2019 to 2022. This shows investment in non-manufacturing penny stock with an investment goal of 2 to 3 years will yield significant return.

Table 4: Showing Year-wise distribution of Manufacturing Penny Stocks based on Share Price

Share Price	2017-18	2018-19	2019-20	2020-21	2021-22	Average No. of Penny Stock	%
0.01 to 1.00	4	8	4	1	1	3.6	21%
1.01 to 3.00	3	7	7	7	4	5.6	33%
3.01 to 5.00	2	1	4	3	5	3.0	18%
5.01 to 7.00	1	1	1	2	6	2.2	13%
7.01 to 10.00	7	0	1	4	1	2.6	15%
Total	17	17	17	17	17	17	100%

From table 4 it is found that 33% of manufacturing penny stocks are having share price in the range of Rs. 1.01 to Rs. 3.00. On observing the year wise trend in number of penny stock price movement. It is found that penny stocks which were in price range of Rs. 7.01 to Rs. 10 showed significant decline in price resulting into decrease in number of penny stock in price range of Rs. 7.01 to Rs.10 from 2018-19 to 2019-20. Whereas significant number of penny stock increased in price band of Rs. 0.01 to Rs. 3.00 from 2018-19 to 2020-21. This shows investment in manufacturing penny stock in price band of 7.01 to Rs.10 during 2017-18 with an investment goal of 2 to 3 years would yield negative return, this may be due to influence of covid. Due to covid pandemic most of the manufacturing firm sales dropped, leading to low profits or negative profit, resulting in decrease in share price.

Table 5: Financial Ratios of Manufacturing & Non-Manufacturing Penny Stock

Source: Author Computation

Year	Non-Manufacturing Firm						Manufacturing Firm					
	CR	QR	EPS	D-E	ROE	DP Ratio	CR	QR	EPS	D-E	ROE	DP Ratio
2017-18	27.41	25.37	-0.63	-1.42	-2.10	0.00	1.84	1.26	-22.48	-0.60	-15.04	1.12
2018-19	8.04	7.27	-0.95	0.44	-12.09	1.44	1.82	1.20	-14.77	-0.11	-8.64	1.24
2019-20	6.88	6.08	-0.46	0.74	-74.56	0.00	1.97	1.19	-13.76	1.39	-20.37	1.90
2020-21	2.76	2.39	-0.19	0.23	-95.46	0.00	3.19	2.32	-18.40	1.11	-5.13	0.96
2021-22	13.46	6.27	-0.37	0.23	80.30	0.00	3.34	2.32	-8.50	1.47	-35.15	1.51
Mean	**11.71**	**9.48**	**-0.52**	**0.04**	**-20.78**	**0.29**	**2.43**	**1.66**	**-15.58**	**0.65**	**-16.87**	**1.34**

From Table 5 it is found that the mean current ratio of non-manufacturing firm is higher than manufacturing firm i.e. 11.71. At the same time the mean current ratio of manufacturing firm 2.43 is more than industry standard 2:1. This show that both the type of companies, short term liquidity position is good. The quick ratio also shows the same trend as current ratio for both the type of companies. The mean EPS for non-manufacturing firm is showing improving trend year on year basis with mean value of -0.52. On the other hand Mean EPS for manufacturing firm is -15.58 with gradual improving trend over the 5 years period. observed that the Debt-Equity ratio of manufacturing firm is on higher side than the industry standard 1:1. It is important to note that while CR,QR, EPS, D-E ratio for non-manufacturing firm favoured compared to manufacturing firm, but mean ROE is negative and on higher side for non-manufacturing firm compare to manufacturing firm. And also the mean Divident payment is low for non-manufacturing firm, compare to manufacturing firm.

Table 6 displays the results of the T-Test: Paired Two Sample Means.

Varibles	Mean Z Score_NM	Mean Z Score_M
Mean	3.05	3.55
Variance	2.88	2.53
Observations	17	17
Pearson Correlation	0.9617	
Hypothesized Mean Difference	0	
df	16	
t Stat	-4.4424	
P(T<=t) one-tail	0.00020	
t Critical one-tail	1.7458	
P(T<=t) two-tail	0.00040	
t Critical two-tail	2.1199	

Source: Author Computation

According to table 6, the mean Z Score of a non-manufacturing firm is 3.05 and that of a manufacturing firm is 3.55. This demonstrates that all of the firms are in the safe zone. The correlation coefficient of 0.9617 indicates that the sample company under study is more likely to be in the safe zone. At 5% significance, the p-value is 0.00040, which is less than 0.05. As a result, H0 is rejected and H1 is accepted. That is, the Z scores of non-manufacturing and manufacturing firms differ significantly.

CONCLUSION

The aim of this research is to know the application of Z score model in predicting the financial stability and performance of penny stock companies listed on the NSE/BSE. To make the study more specific we have selected equal number of penny stock belonging to manufacturing and non-manufacturing firm. After applying the Z score model to these companies it is found that two companies from both manufacturing and non-manufacturing firm are in distress zone indicating the possibility of bankruptcy in near future. So investor should avoid investing

in these two companies. Also by using the financial ratio it is also found that short term liquidity position of non-manufacturing firms is better than manufacturing firm. Finally, at the 5% level of significance, we discovered a significant difference in the Z score of manufacturing and non-manufacturing firms tested. This shows Z score model cannot be universally applied to all the companies. Depending upon the type of industry the model is modified and applied.

REFERENCES

1. Anh, L. C. H., & Hang, N. T. (2012) Testing the Z-index model ofAltman in forecasting failure businesses in Vietnam. Magazine Journal of Banking Technology, 74 (inVietnamese). Retrieved from http://www.vjol.info/index.php/NH/article/view/1544711.
2. Apoorva DV, Curpod SP, Namratha M. Application of Altman Z-score model on selected Indian companies to predict bankruptcy. International Journal of Business and Management Invention. 2019;8(1):77-82
3. Chandra, H., & Selvaraj, A. (2013). A study on financial health of the selected Indian Steel Companies. SMART Journal of Business Management Studies, 9(1), 36-42.
4. Cuong, N. T., & Anh, P. T. (2010).Assess the bankruptcy risk of the seafood processing enterprises listed on the stock market Vietnamese securities. Faculty Magazine School of Fisheries Technology – School Nha Trang University,02, 27-33(in Vietnamese). Retrieved from https://www.researchgate.net/profile/Nguyen_Thanh_Cuong2/publication/283543013_Evaluating_bankruptcy_risk_of_seafood_processing_enterprises_currently_listed_on_Vietnam_stock_market/links/564320d608ae9f9c13e02019/Evaluating-bankruptcy-risk-ofseafood-processing-enterprisescurrently-listed-on-Vietnam-stockmarket.pdf
5. Dr. Marimutu et. al (2019). Financial health of selected telecom companies in India. Think India journal, Vol 22, Issue 10.
6. Duong, N. T. (2013). Risk analysis risk in banking activities. Magazine development and integration magazine, 9(19), 29-39 (in Vietnamese). Retrieved from http://www.vjol.info/index.php/kttc/article/viewFile/12279/11264
7. Hussain, F., Ali, I., Ullah, S., & Ali,M. (2014). Can Altman Z-score Model Predict Business failures inPakistan? Evidence from Textile companies of Pakistan. Journal of Economics and Sustainable Development, 5(13), 10-115. Retrieved from https://www.iiste.org/Journals/index.php/JEDS/article/view/14273/1458
8. P. Mohanasundaram (2015) Financial Health of selected sugar companies in India:Altman –Z Score model, Intercontinental Journal of Banking, Insurance and Finance, Vol2, issue V, 20-27.
9. Shilpa, N. C., & Amulya, M. (2017). Corporate financial D: analysis of Indian automobile industry. SDMIMD Journal of Management, 8(1), 47-54